

**WHAT IS CLAIMED:**

1. A modem comprising:

a signal detector adapted to receive a signal, the signal including a data

component and one or more echo components;

a timing unit adapted to identify delays of said one or more echo components;

and

an echo cancellation unit adapted to cancel one or more echoes once said

delays have been identified.

2. A modem in accordance with claim 1, said data component comprising

a sinusoid at a predetermined frequency.

3. A modem in accordance with claim 2, said echo signals comprising

signals at substantially said predetermined frequency and at differing amplitudes.

4. A modem in accordance with claim 3, said timing unit adapted to

identify said delays by determining periods between peaks of said data component

and said one or more echo components.

5. An echo cancellation method, comprising:

transmitting a training sinusoid to a remote modem;

receiving a return signal, said return signal comprising said training sinusoid

and one or more echo signals having substantially the same frequencies as said

training sinusoid; and

identifying echoes by determining delays between peaks of said return

training sinusoid and peaks of said one or more echo signals.

6. An echo cancellation method according to claim 5, further comprising:

canceling echoes based on said delays.

7. An echo cancellation system, comprising:

means for transmitting a training sinusoid to a remote modem;

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1            8.        An echo cancellation system according to claim 7, further comprising:  
2 means for canceling echoes based on said delays.

9. A method comprising:

receiving a signal, the signal including a data component and one or more echo components;

identifying delays of a plurality of echo components; and

canceling one or more echoes once said delays have been identified.

1        10.    A method in accordance with claim 9, said data component comprising  
2 a sinusoid at a predetermined frequency

1        11.    A method in accordance with claim 10, said echo signals comprising  
2 signals at substantially said predetermined frequency and at differing amplitudes.

1           12. A method in accordance with claim 11, including identifying said delays  
2 by determining periods between peaks of said data component and said one or more  
3 echo components.